

401 KAR 45:110. Technical and operating requirements for special waste landfills.

RELATES TO: KRS 224.01, 224.10, 224.40, 224.46, 224.50, 224.99

STATUTORY AUTHORITY: KRS 224.10-100, 224.40-305, 224.50-760

NECESSITY, FUNCTION, AND CONFORMITY: KRS Chapter 224 requires the cabinet to adopt administrative regulations for the management, processing or disposal of wastes. KRS 224.40-305 requires persons who establish, construct, operate, maintain or permit the use of a waste site or facility to obtain a permit. This chapter establishes the permitting standards for special waste sites or facilities, and the standards applicable to all special waste sites or facilities. This administrative regulation sets forth the technical and operating requirements for special waste landfills.

Section 1. Design Requirements. The engineering design for a special waste landfill shall demonstrate compliance with 401 KAR 30:031 and the siting standards of 401 KAR 45:130 considering the following:

- (1) The physical and chemical characteristics of the waste, including compatibility of the waste with the liner, if required; cover materials, if required; and water that may come in contact with the waste;
- (2) Volume of waste;
- (3) The climatic conditions in the area;
- (4) The permeability of the liner material, if required. The liner shall assure containment of the waste on site and compliance with 401 KAR 30:031;
- (5) The properties of the soil underlying the facility;
- (6) Hydrogeologic characteristics of the site including quality, quantity, current use, and direction of groundwater flow;
- (7) The design of the facility leachate control system, run-off control system, and gas migration control, if required, as it relates to the physical and chemical characteristics of the waste, the climatic conditions of the specific location, the volume of leachate and contaminated run-off collected at the facility;
- (8) The proximity of the facility to surface water and groundwater;
- (9) The potential for gas emissions and odors; and
- (10) Any additional requirements specified by the cabinet.

Section 2. Construction Quality Control Plan. (1) An applicant for a special waste landfill permit shall submit a construction quality control plan conforming to Section 4 of this administrative regulation containing the following elements:

- (a) The persons responsible for each part of the quality control plan;
- (b) Frequencies and specifications for inspections and tests;
- (c) Forms to be used;
- (d) Survey control system of plan views and cross-sections for such inspections and tests; and
- (e) A statement to be used for certifying that the quality control plan was followed by the owner or operator.

(2)(a) The construction quality control plan shall provide assurance that the layers of the homogeneous low permeability soil liners, if required, are compacted using nonvibratory compactors with full depth penetrating feet with a minimum of six (6) passes per soil layer. The compacter ballast shall be varied to prevent reaching the desired proctor density within less than six (6) passes. The foot length shall be one (1) inch longer than the loose soil layer thickness.

(b) Smooth rollers may be used at the end of each work period to seal the surface from rain infiltration.

Section 3. Operating Requirements. (1) The owner or operator of a special waste landfill shall operate the facility in accordance with the requirements of KRS Chapter 224, the requirements of this chapter, the conditions of the special waste landfill permit issued by the cabinet, and the operational plan filed with and approved by the cabinet.

(2) The owner or operator of a special waste landfill shall operate the facility in such a manner to ensure compliance with 401 KAR 30:031.

(3) The owner or operator of a special waste landfill shall inspect the site and operation at a sufficient frequency to ensure compliance with 401 KAR 30:031.

(4) The owner or operator of a special waste site or facility that is open to the public shall have a sign located at the entrance that indicates the landfill name, the names of the owner and the operator, the hours that the landfill is accepting wastes, the permit number, the contact person, and the emergency telephone number.

(5) One (1) copy of the permit application shall be returned to the permittee. The permit with all applicable conditions shall be conspicuously displayed at all special waste sites or facilities with a formal permit for the duration of the permit period. A copy of the approved application, including plans, shall be available at the site, or at a location approved by the cabinet.

(6) Records and reports shall be maintained and submitted in accordance with the requirements of Section 4 of this administrative regulation and Section 1(8) of 401 KAR 45:140.

(7) The cabinet may place additional requirements on the owner or operator of a special waste landfill if necessary to ensure compliance with 401 KAR 30:031.

Section 4. Special Waste Landfill Recordkeeping and Reporting. An applicant for a special waste landfill permit shall submit plans for a recordkeeping and reporting system. The plan shall meet the following requirements:

(1) Surface water and groundwater samples shall be collected and analyzed according to 401 KAR 45:160 and the following criteria:

(a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

(b) The owner or operator shall retain records of all monitoring information, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report, certification, or application. This period may be extended by request of the cabinet at any time. In addition, the owner or operator shall maintain records from all groundwater monitoring wells and associated groundwater surface evaluations, for the active life of the facility, and for the closure care period as well.

(c) Records of monitoring information shall include:

1. Date, exact place, and time of sampling or measurements;
2. Individual who performed the sampling or measurements;
3. Date analyses were performed;
4. Individual who performed the analyses;
5. Analytical techniques or methods used; and
6. Results of such analyses.

(2) A summary of the monitoring information shall be submitted to the cabinet semiannually.

(3) If the owner or operator is conducting surface water and groundwater monitoring that meets the requirements of this chapter as part of a permit other than the special waste permit, certified copies of records and reports may be submitted to the cabinet rather than conducting and maintaining duplicative monitoring requirements.

Section 5. Closure and Postclosure Requirements. (1) A special waste landfill shall be closed in a manner that complies with 401 KAR 30:031. The owner or operator of a special waste landfill shall

submit a closure plan that includes a closure design as specified in subsection (2) of this section, a closure cost estimate in accordance with Section 2 of 401 KAR 45:080, a narrative discussing the closure plan's conformance with 401 KAR 30:031 and a schedule for implementation of the plan.

(2) A closure plan shall have a closure design prepared to specify the function and design of the final cover on the special waste landfill considering:

- (a) The type and amount of waste in the facility;
- (b) The mobility and expected rates of migration of the waste or leachate constituents;
- (c) The site location, topography, surrounding land use, and final site use;
- (d) The climatic conditions in the area;
- (e) The characteristics of the cover material including its chemical and physical composition, erodibility, slope stability, final surface contours, thickness, porosity, permeability, slope, length of run of slope, and type of vegetation on the cover; and
- (f) The geology and soil profiles and surface and subsurface hydrology of the site.

(3) A postclosure plan shall be submitted by the owner or operator of the special waste landfill that includes a monitoring and maintenance schedule for the landfill and a postclosure cost estimate in accordance with Section 3 of 401 KAR 45:080.

(4) Upon cessation of special waste disposal activities at the landfill, the owner or operator shall implement the approved closure plan in accordance with its terms and the requirements of this chapter. An owner or operator may be required to revise a closure plan prior to implementation.

(5) Upon completion of the implementation of an approved closure plan, a special waste landfill shall be maintained under its postclosure plan for a minimum of five (5) years in a manner that complies with 401 KAR 30:031.

(6) The cabinet may release a portion of the financial assurance executed in accordance with 401 KAR 45:080 in an amount that exceeds the funds necessary to maintain the final cover to correct vegetative growth and erosion, and the cost of postclosure environmental monitoring two (2) years into the five (5) year period established in subsection (5) of this section. These funds shall be released upon inspection of the permit records and the site to determine that it is in compliance with all regulatory requirements, the terms of its closure plan and it has at least a ninety (90) percent permanent vegetative cover or other cover as approved by the cabinet. The excess funds shall be released within 180 days of the cabinet's determination of the existence of excess financial assurance.

(7) The owner or operator of a special waste landfill shall record a notice that shall in perpetuity notify any potential purchaser of the property of the location and time of the operation of the facility, the nature of the waste placed in the site and a caution against future disturbance of the area. This notice shall be recorded in accordance with KRS Chapter 382 and proof of recording shall be submitted to the cabinet prior to acceptance of certification of closure of the landfill.

(8) At the conclusion of the five (5) year postclosure monitoring period, the owner or operator of the special waste landfill shall submit a certification that closure and postclosure of the site is complete in accordance with the approved closure and postclosure plans, and that the site is in conformance with the terms of this chapter and 401 KAR 30:031. The cabinet shall review the certification, conduct a site visit and review the permit records to determine if the site is closed in accordance with this chapter, 401 KAR 30:031, and KRS Chapter 224. If the certification of closure is accurate and there is no outstanding environmental violations at the site, the cabinet shall accept the certification of closure and, within 180 days of accepting the certification, release any remaining financial assurance executed under 401 KAR 45:080.

(9) Any necessary environmental remediation steps or corrective action for groundwater contamination required under 401 KAR 45:160 shall be performed before the special waste landfill postclosure is certified as complete and financial assurance is released. (18 Ky.R. 3103; eff. 6-24-1992; Crt eff. 9-5-2018.)